

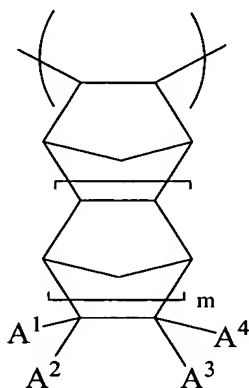
IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method of forming a cavity between multilayered wirings, which comprises

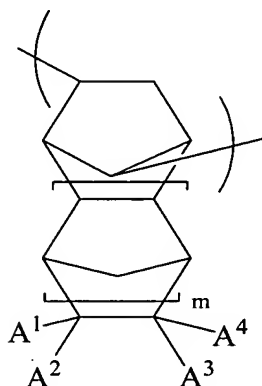
a step of coating the surface of a first dielectric film formed on a semiconductor substrate with a cyclic olefin based addition ~~polymer containing at least one repeating unit selected from repeating units represented by the following general formulae (1) to (7)~~ copolymer containing at least one repeating unit selected from repeating units represented by the following general formulae (1) to (3) and at least one repeating unit selected from repeating units represented by the following general formulae (4) to (7):

General formula (1)



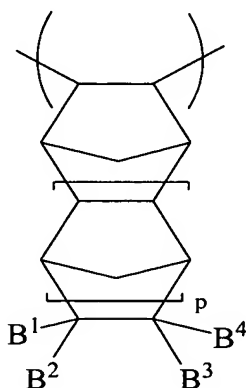
wherein A¹ to A⁴ each independently represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1-10 carbon atoms or a halogenated hydrocarbon group having 1-10 carbon atoms; and m is 0 or 1,

General formula (2)



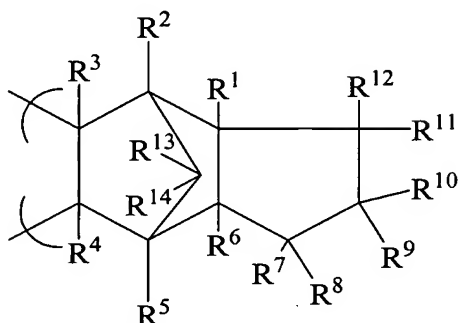
wherein A¹ to A⁴ and m are the same as defined in the formula (1),

General formula (3)



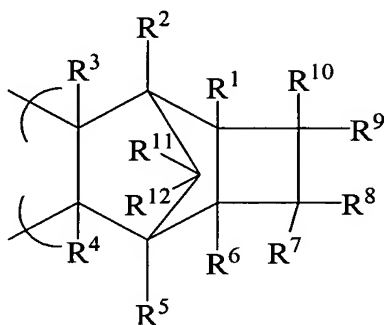
wherein B¹ to B⁴ each independently represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1-10 carbon atoms, a halogenated hydrocarbon group having 1-10 carbon atoms, a hydrolyzable silyl group, or a polar group represented by $-(CH_2)_kX$; at least one of B¹ to B⁴ represents a hydrolyzable silyl group or a polar group represented by $-(CH_2)_kX$; X represents $-C(O)OR^{21}$ or $-OC(O)R^{22}$; R²¹ and R²² each represents hydrogen, a hydrocarbon group having 1-10 carbon atoms or a halogenated hydrocarbon group having 1-10 carbon atoms; \underline{k} represents an integer of 0-3; B¹ to B⁴ may be a hydrocarbon ring or a heterocyclic structure formed by B¹ and B³ or B² and B⁴, or an alkylidenyl, an imide or a carboxylic anhydride formed by B¹ and B² or B³ and B⁴; and \underline{p} represents an integer of 0-2,

General formula (4)



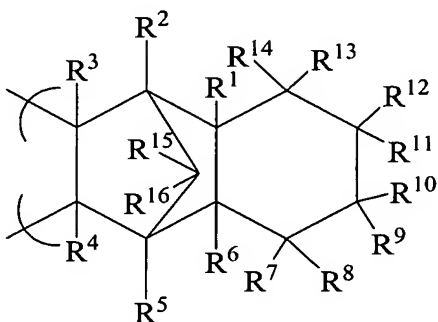
wherein R¹ to R¹⁴ each independently represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1-10 carbon atoms or a halogenated hydrocarbon group having 1-10 carbon atoms,

General formula (5)



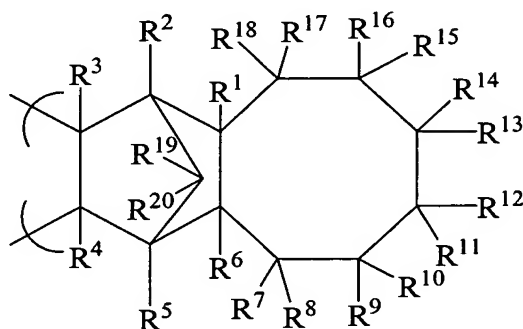
wherein R¹ to R¹² each independently represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1-10 carbon atoms or a halogenated hydrocarbon group having 1-10 carbon atoms,

General formula (6)



wherein R^1 to R^{16} each independently represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1-10 carbon atoms or a halogenated hydrocarbon group having 1-10 carbon atoms, and

General formula (7)



wherein R^1 to R^{20} each independently represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1-10 carbon atoms or a halogenated hydrocarbon group having 1-10 carbon atoms,

a step of patterning the cyclic olefin based addition polymer as a void-forming polymer,

a step of forming a metallic wiring in the pattern formed on the void-forming polymer,

a step of forming a second dielectric film on the void-forming polymer containing a metallic wiring, and

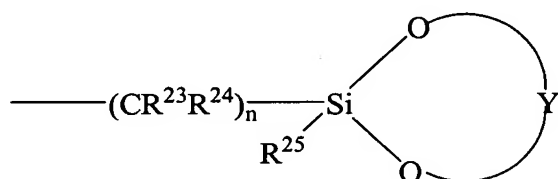
a step of removing the void-forming polymer between the multilayered wirings by heating to form a cavity between the metallic wirings.

Claim 2 (Currently Amended): The method as claimed in claim 1, wherein the cyclic olefin based addition ~~polymer~~ copolymer contains 20 ~~me%~~ mol% or more of the repeating unit represented by the general formula (1) and/or general formula (2).

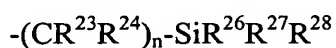
Claim 3 (Currently Amended): The method as claimed in claim 1, wherein the cyclic olefin based addition ~~polymer~~ copolymer contains 50 mol% or less of the repeating unit represented by the general formula (3).

Claim 4 (Currently Amended): The method as claimed in claim 1, wherein the cyclic olefin based addition ~~polymer~~ copolymer containing contains repeating units represented by general formula (3) containing a hydrolyzable silyl group, as the hydrolyzable group, which is a group represented by the following general formula (8) or (9):

General formula (8)



General formula (9)



wherein R²³, R²⁴, and R²⁵ each independently represents a hydrogen atom, an alkyl group having 1-6 carbon atoms, a cycloalkyl group having 3-6 carbon atoms or an aryl group having 4-6 carbon atoms; R²⁶, R²⁷, and R²⁸ each independently represents a hydrogen atom, an alkyl group having 1-6 carbon atoms, a cycloalkyl group having 3-6 carbon atoms, an aryl group having 4-6 carbon atoms, an alkoxy group having 1-6 carbon atoms or an aryloxy group having 4-6 carbon atoms, or a halogen atom; n represents an integer of 0-5; and Y represents a hydrocarbon residue of an aliphatic diol, an alicyclic diol or an aromatic diol, having 2-26 carbon atoms.

Claim 5 (Currently Amended): The method as claimed in claim 1, wherein the cyclic olefin based addition ~~polymer~~ copolymer has a weight loss on heating at 350°C for one hour

in an inert gas atmosphere and/or a vacuum atmosphere of 5 wt% or less and a weight loss on heating at 500°C for one hour in an inert gas atmosphere and/or a vacuum atmosphere of 80 wt% or more.

Claim 6 (Currently Amended): The method as claimed in claim 1, 2, 3 or 4, wherein the cyclic olefin based addition ~~polymer~~ copolymer has a glass transition temperature of 300°C or higher.

Claim 7 (Currently Amended): The method as claimed in claim 1, wherein the cyclic olefin based addition ~~polymer~~ copolymer has an elastic modulus at 25°C of 3 GPa or more.

DISCUSSION OF THE AMENDMENT

Claim 1 has been amended to require that the cyclic olefin based addition polymer be a copolymer containing repeating units represented by at least one of general formulae (1) to (3), and repeating units represented by at least one of formulae (4) to (7). The amendment is deemed supported by the various examples, which show copolymers of bicyclo compounds, i.e., of formulae (1)-(3), and, for example, tricyclo compounds, i.e., of formulae (4)-(7).

Claim 2 has been amended to correct a typographical error.

Claim 4 has been amended to verify that the cyclic olefin based addition copolymer of this claim contains repeating units represented by general formula (3).

The remaining amendments have been made to be consistent with the amendment to Claim 1.

No new matter is believed to have been added by the above amendment. Claims 1-7 remain pending in the application.